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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,190	03/29/2004	Hitoshi Hagimori	15162/05730	2862
24367	7590	01/29/2008		
SIDLEY AUSTIN LLP 717 NORTH HARWOOD SUITE 3400 DALLAS, TX 75201			EXAMINER GREECE, JAMES R	
			ART UNIT 2873	PAPER NUMBER
			MAIL DATE 01/29/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/812,190

Applicant(s)

HAGIMORI ET AL.

Examiner

James R. Greece

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Detailed Action***

Applicant cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Status of the Application***

Claims 1-11 are pending in this application

If the applicant is aware of any prior art or any other co-pending application not already of record, he/she is reminded of his/her duty under 37 CFR 1.56 to disclose the same.

***Drawings***

There are no objections to applicant's drawings at this time.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakayama (USPAT 5,111,338).

In regard to claim 1, Nakayama teaches the following as claimed:

A first lens unit disposed on a most object side and having a negative optical power; (for details see at least figure 2a-c) a second lens unit having a positive optical power; (for details see at least figure 2a-c) a following lens unit having at least a third

lens unit and a fourth lens unit and having at least a positive lens element and a negative lens element in a lens unit, (for details see at least figure 2a-c)

wherein the following condition is satisfied:

$$3 < |f_l/f_w|$$

where  $f_l$  is a focal length of the most image side lens unit, and  $f_w$  is a focal length of the zoom lens system in a shortest focal length condition (for details see at least col. 5, lines 9-11)

In regard to claims 3, Nakayama teaches the following as claimed:

Wherein the most image side lens unit has a negative optical power (For details see at least figures 2a-c)

In regard to claim 7, Nakayama teaches the following as claimed:

Wherein the first lens unit is moved so as to draw a locus convex to the image side in zooming from the shortest focal length condition to the longest focal length condition (for details see at least figures 1 & 2 a-c)

In regard to claim 8, Nakayama teaches the following as claimed:

$$v_1 > 45$$

Where  $v_1$  is the Abbe number of the single negative lens element constituting the first lens unit (For details see at least numerical examples 4-6)

In regard to claim 9, Nakayama teaches the following as claimed:

Wherein the zoom lens systems satisfy the following condition:

$$2.3 \leq f_t/f_w \leq 5.5$$

Where  $f_w$  is the focal length of the zoom lens system in the shortest focal length, and  $f_t$  is the focal length of the zoom lens system in the longest focal length condition (see at least numerical examples 1-3)

In regard to claim 10, Nakayama teaches the following as claimed:

an electric image sensor converting an optical image formed by the zoom lens system, into electric image data, (an inherent feature of the device, the reference discloses the device is to be used in a video camera for instance col. 1, lines 5-25, therefor inherently disclosing this limitation since that is the function of a video camera.) and a zoom lens system, (See at least abstract line 1) said zoom lens system comprising, a first lens unit disposed on a most object side and having a negative optical power; (for details see at least figure 2a-c) a second lens unit having a positive optical power; (for details see at least figure 2a-c) and a following lens unit having at least a third lens unit and a fourth lens unit and having at least a positive lens element and a negative lens element in a lens unit, (for details see at least figure 2a-c)

Wherein the following condition is satisfied

$$3 < |f_l/f_w|$$

Where  $f_l$  is a focal length of the most image side lens unit, and  $f_w$  is a focal length of the zoom lens system in a shortest focal length condition (for details see at least col. 5, lines 9-11)

In regard to claim 11, Nakayama teaches the following as claimed:

an electric image sensor converting an optical image formed by the zoom lens system, into electric image data; (an inherent feature of the device, the reference discloses the device is to be used in a video camera, for example in col. 1, lines 5-25, therefor inherently disclosing this limitation since that is the function of a video camera.) and a zoom lens system, (See at least abstract line 1) said zoom lens system comprising, a first lens unit disposed on a most object side and having a negative optical power; (for details see at least figure 2a-c) a second lens unit having a positive optical power; (for details see at least figure 2a-c) and a following lens unit having at least a third lens unit and a fourth lens unit and having at least a positive lens element and a negative lens element in a lens unit, (for details see at least figure 2a-c)

Wherein the following condition is satisfied

$$3 < |f_l/f_w|$$

Where  $f_l$  is a focal length of the most image side lens unit, and  $f_w$  is a focal length of the zoom lens system in a shortest focal length condition (for details see at least col. 5, lines 9-11)

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama (USPAT 5,111,338).

In regard to claim 4, Nakayama does not explicitly teach the following as claimed:

Wherein the most image side lens unit includes at least one aspherical surface (For details see at least figures 2a-c)

However the examiner takes official notice to the fact that utilizing aspherical surfaces is well known in the art of lens design. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Nakayama to include an aspherical surface on one of the lenses on the most image side for the predictable result of correcting astigmatic aberrations.

6. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama (USPAT 5,111,338) as applied to claim 1 above, and further in view of Murayama (USPUB 2003/0189768).

In regard to claim 5, Nakayama does not explicitly teach the following as claimed:

Wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm and not included in the most image side lens unit.

However Murayama teaches this limitation (See at least numeral 30 and figs 3, 7, 11 and paragraph 0047)

It would have been obvious to one having ordinary skill in the art of lens design at the time the invention was made to modify the device of Nakayama such that the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm and not included in the most image side lens unit as taught by Murayama for the predictable result of providing a lens system which is more compact (shorter length, smaller diameter lenses).

In regard to claim 6, Nakayama does not explicitly teach the following as claimed:

Wherein the first lens unit includes only one negative lens element

However Murayama teaches this limitation (See at least numeral 10)

It would have been obvious to one having ordinary skill in the art of lens design at the time the invention was made to modify the device of Nakayama such that the first lens unit includes only one negative lens element as taught by Murayama for the predictable result of providing a lens system which is more compact (shorter length, smaller diameter lenses).

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:



The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

9. The specification in regard to newly amended claims 1, 10 and 11, as well as dependent claims 2-9 do not disclose third and fourth lens units each having a positive and negative lens element. Therefore there is insufficient support for the claim limitation "a following lens unit having at least a third lens unit and a fourth lens unit and having at least a positive lens element and a negative lens element in a lens unit", since the third lens unit only has a positive lens element, but no negative lens element.

The specification in regard to newly amended claim 2, does not disclose a most image side lens unit having a positive optical power in a 4 unit lens system(fig 1, Emb 1). Therefore there is insufficient support for the claim limitation wherein the most image side lens unit has a positive optical power.

### *Claim Objections*

10. Claim 8 recites the limitation "the single negative lens element" in line four of the claim. There is insufficient antecedent basis for this limitation in the claim.

*Response to Arguments*

11. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

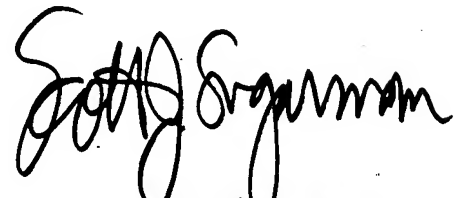
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Greece whose telephone number is 571-272-3711. The examiner can normally be reached on M-Th 7:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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571-272-3711



Scott J. Sugarman  
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